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TITLE: INNER LEAD WITH GOLD BUMP, ITS MANUFACTURE AND SEMICONDUCTOR ELEMENT

PUBN-DATE: August 22, 1995

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APPL-NO: JP06016696

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ABSTRACT:

PURPOSE: To realise easy transfer of gold bump from a gold bump forming substrate by forming only one gold bump of which column portion is not less than specified times higher than the whole bump, removing an insulating layer after the gold bump is formed and then pressing the inner lead to the gold bump with a pressure.

CONSTITUTION: A conductive layer 2 is provided on an insulating substrate 1 by vacuum deposition method, etc., and this conductive layer 2 is coated with an insulating film 4 and an aperture 5 is then formed, by the patterning of the photo etching, at the position corresponding to the electrodes of a semiconductor element. Height of column portion 3b of the <u>bump</u> is set to 0.5 times or more the total height of the <u>bump</u> conforming to the <u>shape of aperture</u> 5 to relatively increase the height of the column portion 3b of the <u>bump</u>. Moreover, a short diameter D2 of the upper bottom of the bump column 3b of the gold bump 3 is set to 0.5 times the short diameter of the overhang portion 3a of the bump to make small the rate of bump overhand portion 3a to the entire part of bump. In this physical condition, an inner lead 11 is pressed to the gold bump 3 with a pressure. Thereby, since there is no insulating film around the gold bump 3, the inner lead 11 can be transferred easily.

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